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CLAIMS

NOD 18-31

- 1. A method for the reconstruction of the anterior cruciate ligament of a patient comprising the steps of:-
- a) forming a tendon graft from tendon, other soft tissue5 or artificial tendon;
 - b) forming a hole through the patient's femur from a suitable point in the intercondylar notch therein anteriorly and laterally, the cross-sectional area of at least an end portion of the hole through the femur adjacent the intercondylar notch being sufficient to
- adjacent the intercondylar notch being sufficient to receive an end of the tendon graft and a suitable screw, peg or other fixation device having a leading end and a trailing end;
- c) forming a suitably positioned hole through the
 patient's tibia opening at one end adjacent the
 cross-sectional medial tibial spine of the tibia of an
 area sufficient to receive the other end of the tendon
 graft;
- d) drawing one end of the tendon graft into the enlarged end portion of the hole in the femur and simultaneously or sequentially drawing the other end of the tendon graft into the hole in the tibia;
 - e) inserting the leading end of a fixation device into the hole in the femur from the intercondylar notch end
- thereof until the trailing end of the fixation device is adjacent that end of the hole, and the tendon graft is pressed directly and firmly against a sidewall of the hole in the femur by the fixation device;
 - f) after tensioning the tendon graft appropriately, securing the other end of the tendon graft to the tibia.
 - 2. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 1 in which the tendon graft is formed from a tendon or tendons harvested from the patient or from a third party.
- 35 3. A method for the reconstruction of the anterior

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cruciate ligament of a patient as claimed in claim 2, in which the tendon graft is formed from a tendon derived from the hamstring tendons of the patient.

- 4. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 3, in which the tendons are the gracilis and semitendonosus tendons of the patient derived from the leg having the anterior cruciate ligament deficiency.
- 5. A method for the reconstruction of the anterior
 10 cruciate ligament of a patient as claimed in claim 4, in which the tendon or tendons are doubled over and trimmed to a desired length.
- 6. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 1, in which each of the free ends of the tendon graft are bound together over a length approximately equal to the length that the respective free ends of the tendon graft will extend through the holes in the femur and the tibia.
- 7. A method for the reconstruction of the anterior
 20 cruciate ligament of a patient as claimed in claim 1, in
 which the hole in the femur and/or the hole in the tibia
 is formed by drilling a guide hole, inserting a guide wire
 into the hole and passing a cannulated rotary awl down the
 guide wire to enlarge the hole to the desired
- 25 cross-sectional size by compressing or compacting the bone surrounding the guide hole.
 - 8. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 6, in which the rotary awl is caused to form adjacent one end of the femoral hole and/or the tibial hole a short region of further increased cross-sectional area adopted to receive
 - a head formed at the trailing end of a fixation device.

 9. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 1, in
- 35 which the one end of the tendon graft is drawn into the

femoral hole and the tibial hole simultaneously by a suture that is connected to the one end of the tendon graft and extends through the tibial hole, the knee joint, the femoral hole and out of the patients thigh.

- 5 10. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 1 in which the other end of the tendon graft is secured to the tibia by inserting the leading end of a fixation device into the tibial hole from its end distal to the tibial
- 10 medial crest until the trailing end of the fixation device is adjacent that end of the hole and the tendon graft is pressed directly and firmly against a sidewall of the hole in the tibia by the fixation device.
- 11. A method for the reconstruction of the anterior
 15 cruciate ligament of a patient as claimed in claim 10, in which the fixation device is a cannulated screw.
 - 12. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 11, in which the screw has a screw thread which is devoid of an
- 20 outermost cutting line.

 13. A method for the reconstruction of the anterior cruciate ligament of a patient as claimed in claim 11, in

which the screw has a hemispherical\head.

just within that hole.

- 14. A method for the reconstruction of the anterior
 25 cruciate ligament of a patient as claimed in claim 1, in which the fixation device inserted into the femoral hole is driven into that hole until the trailing end thereof is
- 15. A method for the reconstruction of the anterior
 30 cruciate ligament of a patient as claimed in claim 1, in which the fixation device inserted into the tibial hole is driven into that hole until the trailing end thereof is just within that hole.
- 16. A method for the reconstruction of the anterior 35 cruciate ligament of a patient as claimed in claim 15, in

which the fixation device is of such a length that its leading end is just within that hole when the trailing end is also just within that hole.

- 17. A method for forming a hole in bone comprising the steps of
 - a) drilling a guide hold in the bone;
 - b) inserting a guide wire into the guide hole; and
 - c) passing a cannulated rotary awl down the guide wire while causing the awl to rotate to enlarge the guide hole
- 10 to a desired size by compressing or compacting the bone around the guide hole.